

MONO LASER PRINTERS

INTRODUCTION

You can buy a mono laser printer for around £60, but at this price it's likely to be slow and basic, and will probably connect to your PC only via USB. Spend just a little more than you would on an entry-level printer, however, and you'll be able to choose from faster, more robust models with added features such as a network port or double-sided printing.

With a maximum budget of £250 there's no shortage of competent laser printers from which to choose, but at this price you could also buy a mono laser multifunction peripheral (MFP). These are quick and convenient if you need to scan and make copies or faxes as well as print.

This month we've compared six mono laser printers and three laser MFPs, each costing between £152 and £250 including VAT. We've tested their fax, scan and copy performance, and checked the speed and quality of printing. Whether you want to scan and copy or just print, we'll help you find the perfect product.

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PRINTS CHARMING

For fast, high-quality prints and low running costs, you can't beat a mono laser printer. We test six mono laser printers and three MFPs to find the best for the small office

Choosing a... Mono Laser Printer

Buying a laser printer with a budget of £250 gives you plenty of choice. This is obviously welcome, but it can also make it harder to spot the right product for you. Before buying, it's worth thinking about what you want your printer to do. Knowing how much you want to print and how you want to connect to your printer will help narrow down the field.

BLACK FOR GOOD

Most lasers can produce sharp black text quickly. Unless you have very good eyesight, you're unlikely to spot any problems with the output from the nine printers in this test. In practice, speed varies much more widely between these printers than quality does.

Manufacturers quote a figure for the maximum speed that the print engine can sustain, but this is based on simple text pages and doesn't include any time that your computer or the printer itself may spend working on a more complicated job. Generally speaking, you can expect a laser printer to come very close to its rated speed when printing text pages, although Lexmark's X342n MFP shows that this isn't always the case. We've tested each one to see how quickly it can really print, and you'll find this information in our reviews and in the table on page 106.

GREY EXPECTATIONS

The higher the graphical content of a print job, the slower it is likely to print. This is particularly true for devices that support the PCL or PostScript print languages, as these involve the printer in more calculations, slowing it down markedly. Printers that support a high resolution have to do even more work to print at their top detail setting, and many can do so only at half their maximum engine speed.

A 1,200dpi resolution can help a printer to produce comparatively sharp and detailed images, but it isn't a guarantee of better quality. To create an effective greyscale image, a printer must use a wide range of grey shades. Mono printers have only a black toner, so they create shades of grey using a process known as dithering. Printing small black dots on a white page at varying densities creates the illusion of grey shades, but the eye can spot the trick if the dots are arranged in a regular pattern. Our reviews explain which printers coped well with graphics by using subtle dithering, and which weren't so good.

CONSUMABLE CULTURE

Mono laser printers usually have only one or two consumables. All lasers print by bonding toner powder



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to paper, and need fresh supplies after anything from 500 to several thousand pages. On many printers, replacement toner cartridges also include a photoconductor drum, which is used to build up an image of the page before transferring it to the paper. On other devices the drum is replaced separately, though you may not need a new one until you've printed 30,000 pages or so.

For every device we divide the cost of each consumable by the number of pages that the manufacturer says it will print, adding the figures together to give a simple cost-per-page figure. You can find this in our table on page 106. This provides an easy way to compare the ongoing print costs of each device, but it doesn't take into account the consumables that are supplied with the printer when you buy it. Our reviews will tell you when a printer is supplied with particularly limited consumables or with surprisingly long-lasting ones.

MULTIFUNCTION ROOM

A multifunction peripheral needs a good printer, as it's also used for making copies or receiving faxes, but the scanner is equally important. A scanner's resolution governs how much detail it can capture from the original document, but other considerations can influence image quality. Our reviews tell you which devices create accurate scans and which perform poorly.

Though mono laser MFPs typically have only a modest scan resolution of 600dpi, this is plenty for office jobs such as archiving documents or making photocopies. For office devices such as these, it's important to consider practicalities such as whether the scan driver will work over a network connection. If not, you'll be able to print from any network computer, but will have to use a single USB-connected PC for scanning.

EXTRA, EXTRA

If you have a growing business or you suspect your needs may change, consider your printer's scope for upgrades. You can upgrade the memory of most of the devices in this review,

which could help to speed up complex jobs and may enable you to print very high-resolution images that can't be processed with the standard memory. Many printers can be upgraded with new interfaces, too, so you could add a wireless network connection later, for example. You can find details in the table on page 106.

With some devices, certain upgrades aren't available as an after-sales option, but they may be found on other models in the range. Even if features such as duplex printing or faxing are an option, it's normally cheaper to buy a model with them fitted than to upgrade a more basic device later. Stretching your budget to buy the right model now could save you money later.

Fade to grey Print and copy quality compared



▲ Good print quality doesn't guarantee good results elsewhere from an MFP. Lexmark's X342n produced decent greyscale graphics in our print test (left), but a direct copy of the result came out too dark at the default settings (right)



LEXMARK E250dn



£152 inc VAT



At £152, Lexmark's E250dn is the most affordable laser printer in this test. It's more expensive than a typical entry-level laser, but it's better specified. It has an engine speed that matches more expensive printers such as Samsung's ML-3051ND, a network port and a built-in automatic duplexer.

The E250dn is made from the same mix of black and grey plastic as the rest of Lexmark's affordable laser printer range. It coordinates well with a black PC case, but it might stand out more than a beige or grey model. It's a reasonably compact and light printer, but the access panel for the consumables flexes easily and feels too thin. You'll need to open this to remove some foam packaging before the printer is ready to go, but a clear Quick Setup sheet guides you through the process.

As with all Ethernet-capable printers, we connected to the E250dn via our Labs network. Lexmark's setup program asked a few questions before automatically detecting and configuring the printer. Though the E250dn supports both PCL and PostScript print languages, only PCL is added by the Suggested install option.

This is the only single-function printer in this test with a 600x600dpi resolution, and its shading in graphics and photos was more coarse and grid-like than many of the printers here. That said, it produced a good range of grey shades, so photographs still looked detailed and natural. Illustrations also printed well, but grey text had granular edges and small fonts appeared less clear than ideal. Black text was crisp and dark, however.

The E250dn has only a single-sheet multipurpose feed, but it is marked with the correct orientation for paper and envelopes. When printing envelopes it produced a soft crumpling noise, but they emerged unscathed.

VERDICT

Despite its price, this was the fastest printer in all but our duplex print test. It was also quick to resume printing after an overnight rest. High running costs make it poor value for very heavy users, but for anyone else it's a bargain.

SUMMARY

- ✓ Fast, high-quality printing
- ✓ Affordable and flexible
- ✗ Above-average printing costs

HOME/SMALL OFFICE MONO LASER 600x600dpi, 28ppm mono, parallel, USB Hi-Speed and 10/100 Ethernet interfaces PART CODE 0033G0315
SUPPLIER www.morecomputers.co.uk
DETAILS www.lexmark.co.uk



KYOCERA MITA FS-1030D



£176 inc VAT

If you like computer peripherals that are easy to set up, Kyocera Mita's FS-1030D probably isn't for you. The physical setup involves nothing trickier than slotting in a small toner cartridge, but installing the driver is another matter. Kyocera Mita's setup program allows you to accept a licence agreement without automatically displaying it, after which you have to choose the FS-1030D from a list of printers and make three further selections before the installer finally starts. After a uniquely unfriendly process that some users will find hard to navigate, we were prompted to print a test page. This appeared only after we'd restarted our test PC in frustration.

The setup is a shame, as the FS-1030D is otherwise easy to use. It has a 250-sheet covered paper cassette and a 50-sheet multipurpose feed. Its output tray's 250-sheet capacity is the highest here and, like many other printers here, it can automatically print on both sides of each sheet of paper.

Kyocera Mita ships the FS-1030D with a 3,600-page toner, which is generous at this price. The photoconductor drum is guaranteed to last for three years or 100,000 pages, so it's unlikely to need replacing in normal use. You can buy a 7,200-page, high-yield replacement toner for just £54, giving the FS-1030D easily the lowest running costs of this group. Buying the printer and the necessary toners to print 60,000 pages would cost just £610.

Though the 22ppm engine speed isn't great at this price, it came close to it in our tests. It printed black text with neat outlines, although very small fonts were imprecise. Unfortunately, graphics were unimpressive, with a prominent and distracting dither pattern visible across most shades. Light-grey text was very poor, too, with thin white vertical lines.

VERDICT

This printer has no network port, but even when using a USB connection it still manages to be fiddly to install. If you want to print only text, though, and you can live with its frustrations, the FS-1030D's low running costs make it great value.

SUMMARY

- ✓ Extremely low running costs
- ✓ High-quality, reasonably quick text printing
- ✗ Frustratingly hard to install

HOME/SMALL OFFICE MONO LASER 1,800x600dpi, 22ppm mono, parallel and USB Hi-Speed interfaces PART CODE 1102G63UK0
SUPPLIER www.morecomputers.co.uk
DETAILS www.kyoceramita.co.uk



HP LaserJet P2015



£188 inc VAT

HP's LaserJet P2015 costs £188, but it's less well specified than Lexmark's cheaper E250dn. Its engine is rated at 26ppm, but it has only a USB port for connecting a computer. You can't upgrade this model to duplex printing, but HP's £221 P2015d comes with duplex as standard. If you want duplex printing and a network port, you'll need to pay £280 for the P2015dn.

There's quite a bit of orange tape to remove from the P2015, and you need to extract some packaging from the pre-installed toner cartridge before it's ready to print. We found ourselves wishing that Kyocera Mita's software installation was as easy to follow as HP's, though the LaserJet's 150MB Minimum install took longer than most to complete.

The P2015 supports both PCL and PostScript, and it prints with a maximum resolution of 1,200x1,200dpi. It was able to print crisp and solid black text in our tests, and its grey fonts were better than most. We weren't as impressed with its graphical output, though. Greyscale graphics were OK, but the printer seemed reluctant to use full black, making dark charcoal the deepest shade we saw. It was hard to spot dithering in our test photos, but the printer gave them a finish reminiscent of a charcoal sketch. This helped them look quite natural, but led to a softening of fine details. We'd accept more visible dithering if it provided a sharper image.

The printer wasn't able to produce any image at all when we tried to print our 6x4in black and white photos at 1,200dpi, suggesting that it could do with more than the 32MB of memory fitted as standard. We obtained the 6x4in print time in our table on page 106 by using the FastRes 1200 setting, which doesn't give true 1,200dpi output.

VERDICT

The P2015 comes with a high 3,000-page toner, and reasonably priced replacements make it cheap to run. However, it isn't as fast or versatile as Lexmark's E250dn. With a higher resolution it ought to print better-quality graphics, but the results weren't entirely convincing. It's poor value.

SUMMARY

- ✓ Low running costs
- ✗ Basic features for the price
- ✗ Disappointing graphical prints

HOME/SMALL OFFICE MONO LASER 1,200x1,200dpi, 26ppm mono, USB Hi-Speed interface PART CODE CB366A
SUPPLIER www.dabs.com
DETAILS www.hp.co.uk

MONO LASER PRINTERS



KONICA MINOLTA PagePro 1350EN

★★★

£196 inc VAT

Konica Minolta's PagePro 1350EN is a light and compact printer, but as soon as you clip on its simple paper tray it needs nearly twice the desk space. The tray keeps 250 sheets of paper dust-free, and there's a single-sheet multipurpose feed on top. This is marked with a thoughtful icon to let you know that it's the manual feed, but it would be more useful if it showed the correct orientation for paper and envelopes.

The 1350EN's setup utility found the printer on our network. Konica Minolta's driver guides you through manually printing on both sides, but this is the only single-function printer in this test that you can't buy or upgrade with an automatic duplexer.

It has an Ethernet port, but the 1350EN's 20ppm engine speed is slow for a mono laser at this price. It came close to its rated speed when printing text, though, managing 18.8ppm for both draft and correspondence-quality output. Black text was exceptionally good, and even two-point text remained legible.

It's rare to find a mono laser printer that excels at graphics, but even so the 1350EN was unusually slow and its results were fairly disappointing. Its grey text looked rather spiky, with dithering evident around the outline of each character. It was also easy to spot dithering in grey graphics and photos, which were all printed too dark. Our greyscale test patterns showed that the printer barely distinguished between very dark shades, leading to a loss of detail in darker areas.

To test the reliability of a printer's paper feed, we usually print our formal letter test on the reverse of the paper used for our 50-page Draft test. We experienced a couple of paper jams when attempting this with the 1350EN. After one jam we had to reboot the computer before we were able to resume printing, and could only complete the test using fresh paper. Printing envelopes creased them.

VERDICT

The 1350EN is fairly slow and basic for the price, and it has the second highest cost-per-page in this test. With comparatively poor graphics quality, too, it's hard to recommend.

SUMMARY

- ✓ Very easy to set up and install
- ✗ Comparatively slow
- ✗ Above-average printing costs

HOME/SMALL OFFICE MONO LASER 1,200x1,200dpi, 20ppm mono, parallel, USB Hi-Speed and 10/100 Ethernet interfaces PART CODE 5250232-200
SUPPLIER <http://uk.insight.com>
DETAILS www.konicaminoltaprinters.co.uk



DELL Laser Printer 1720dn

★★★★★

£210 inc VAT and delivery



Dell's Laser Printer 1720dn costs £62 more than Lexmark's E250dn, but its specifications are similar. Like the Lexmark it has parallel, USB and Ethernet ports, and can automatically print on both sides of a sheet of paper. There are some differences, too. Dell's printer has a higher 1,200x1,200dpi maximum resolution, and can be upgraded to a larger maximum memory.

This is one of the easiest printers to set up. There's a clear instruction sheet to guide you through unpacking it, and once you load paper, connect the printer to the network and turn it on, it prints an automatic status page confirming the IP address it has leased. Dell's installation software lets you choose whether to install drivers for PCL or PostScript printing or both, but the columns on the page need resizing before you can be sure which is which.

Using its PCL driver the 1720dn was one of the fastest in this group, reaching almost identical speeds to the E250dn in most of our tests. Only when printing photos at its top, higher resolution did it lag behind, and then not by much. Apart from some subtle but unusually broad horizontal banding in graphics, output quality was excellent, with fine shading control and little evidence of dither.

Its PostScript results were disappointing by comparison. Text still looked good and it arrived at much the same rate, but graphics had far too much contrast. As we would expect, they were slower to print, but comparatively inaccurate shading meant they weren't worth the wait.

The printer is supplied with a 3,000-page toner cartridge that could last for a couple of years' light use. Carriage is included in the cost of replacement 6,000-page toners and the 30,000-page drum, so the 1720dn should prove one of the cheapest printers here to own.

VERDICT

We wouldn't recommend the 1720dn to anyone needing great PostScript results, but its PCL output is impressive. If you need good graphics and intend to print regularly, this is the best printer in the group.

SUMMARY

- ✓ Fast, high-quality PCL printing
- ✓ Low running costs
- ✗ PostScript quality not so good

HOME/SMALL OFFICE MONO LASER 1,200x1,200dpi, 28ppm mono, parallel, USB Hi-Speed and 10/100 Ethernet interfaces
SUPPLIER Dell 08709 075818
DETAILS www.dell.co.uk



SAMSUNG ML-3051ND

★★★★

£246 inc VAT

Samsung's ML-3051ND is easy to set up. It's also the most expensive single-function printer in this test, and costs more than Oki's B2540 MFP. It has the highest specification in the group, though, and it comes with the most generous starter toner cartridge.

As with some other Samsung printers that we've tested, a small amount of toner leaked out as we prepared the toner cartridge for use. However, it was easy enough to slot the cartridge home into the printer's front compartment. Samsung's installation utility had no problems finding the printer on our network, and offered to send a test page to prove it. This and a couple of subsequent pages had a couple of stray toner spots, but the problem had cleared up within five pages.

Though the ML-3051ND has a fast top-speed rating and more memory than the other printers here, it wasn't quite the fastest printer overall. It was easily the fastest when duplex printing, however, delivering 50 sides on 25 pages at more than 18 sides per minute. Its duplex mode sounds relatively good when compared to the other printers, too. It made fewer clunking noises, and it produced an expensive-sounding whirr every time a page was whisked back inside for its second pass.

The ML-3051ND produced high-quality results using its PCL print driver. It can create crisp black text, although we could print clear and well-defined two-point text only at 1,200dpi. Graphics were smoothly shaded, although we spotted a small amount of fine banding. This was most noticeable in images with mid-grey tones. Though this printer supports PostScript printing, cheaper models in the range don't. There was no suitable PostScript driver on the CD, so we had to download one from Samsung's website.

VERDICT

The ML-3051ND is a good choice for anyone planning to do lots of double-sided printing, but it's more expensive and little better than Dell's 1720dn. Dell's printer produces better graphics and has a lower cost per page, making the ML-3051ND look average by comparison.

SUMMARY

- ✓ Easy to set up; fast
- ✓ Good print quality
- ✗ Fairly expensive

HOME/SMALL OFFICE MONO LASER 1,200x1,200dpi, 28ppm mono, parallel, USB Hi-Speed and 10/100 Ethernet interfaces PART CODE ML-3051ND/XEU
SUPPLIER www.misco.co.uk
DETAILS www.samsung.co.uk



OKI B2540 MFP



£211 inc VAT

OKi's B2540 MFP isn't particularly easy to set up or use. It isn't too tricky to insert the printer's single consumable or to clip on the ADF's input tray, but the Ethernet port is covered by a pointless sticker that's hard to remove. OKi's installation software doesn't make it immediately clear what the point of each bundled software package is, and we weren't sure which of the applications contained the print drivers and scanning software. Installing this didn't seem to install a driver, and we had to run Install a Network or WiFi Printer from the Companion Suite program group to get the device working. The printer supports the PCL and PostScript languages, but it was hard to tell whether one option was a PCL driver or host-based driver.

The B2540 MFP's printer is rated at a slow 16ppm, and it got close to this only on our formal-letter test. It was unusually slow when printing greyscale graphics, and the results were granular, with obvious dithering patterns. The smooth gradient in the background of our presentation slides printed as a near-black area.

The output tray's paper stop didn't prevent an untidy collection of printed pages. We rearranged this paper back into a neat stack, but the printer jammed when we tried to print manually on the unused side, beeping ceaselessly the moment we removed the paper tray to clear it.

The front panel has a USB port that supports direct printing and scanning, but you can scan directly to a PC only via USB, rather than a network connection. The scanner was slow, and produced softly focused results with some noise visible in dark areas. Copies were the slowest of the three MFPs here, and were too dark.

VERDICT

Little about our experience installing and using the B2540 MFP gave us cause for enthusiasm. Although it's quite affordable to buy, it has a higher cost per page than the other two MFPs, and a higher cost of ownership for anyone but the lightest users. It's not a good choice.

SUMMARY

- ✓ Affordable to buy
- ✗ Tricky to install
- ✗ Generally poor results

MONO LASER MFP 600x600dpi print resolution, 16ppm mono maximum speed, 600x2,400dpi scan resolution, USB and 10/100 Ethernet interfaces

PART CODE 09004383

SUPPLIER www.printerbase.co.uk

DETAILS www.oki.co.uk



BROTHER DCP-8060



£249 inc VAT

Brother's DCP-8060 comes with a detailed setup guide, and is easy to prepare for printing. Installing the software is straightforward, although the diagnostic application behaved oddly. It warned us that it couldn't find the printer, before proceeding to print a report that appeared without a hitch. Most users will want to disable the loud and persistent status beeps, but it's easy to do this from the control panel.

The DCP-8060 doesn't have a fax modem or a network port and can't be upgraded to duplex printing, but other models in Brother's range come with one or more of these features as standard. There's a 250-sheet paper cassette, along with a fold-out 50-sheet multipurpose feed. This is marked with the correct orientation for paper, but not envelopes, which were creased during printing.

Like the other two MFPs here, the DCP-8060 has a 50-sheet automatic document feeder. This can't be used for faxing, but it comes into its own during multipage copies. It copied a 10-page document in just 32 seconds, which is the fastest result we've timed. Brother's TWAIN interface is basic but easy to use, and supports multiple scans per session. At low resolutions the scanner is fairly quick and produces acceptable results, but our 600dpi tests were spoiled by a regular interference pattern.

The DCP-8060 has a quick printer that kept pace with the fastest single-function printers in this group. It took a few seconds to think about our graphics test before spitting out all 24 pages at a breakneck pace. The results were almost as good as the Dell 1720dn's PCL output. Though it isn't particularly cheap to buy, it's inexpensive to run. Only Kyocera Mita's FS-1030D is significantly cheaper to run.

VERDICT

The DCP-8060's print and copy quality is the best of the three multifunction devices here, but with no network port it's a little limited at this price. It's good, but if you can stretch your budget we recommend Dell's Multifunction Laser Printer 1815dn, which has a network port, fax modem and duplexing.

SUMMARY

- ✓ Fast, high-quality prints
- ✓ Affordable to run
- ✗ No network port

MONO LASER MFP 1,200x1,200dpi print resolution, 28ppm mono maximum speed, 600x2,400dpi scan resolution, parallel and USB Hi-Speed interfaces

PART CODE DCP8060U1

SUPPLIER www.morecomputers.co.uk

DETAILS www.brother.co.uk



LEXMARK X342n



£250 inc VAT

Lexmark's X342n isn't pretty, but with a fax modem and a network port it's better specified than the similarly priced Brother DCP-8060. Like Dell's Laser Printer 1720dn, it prints a configuration sheet when loaded with paper and connected to the network. Its setup program didn't need to be told the printer's IP address, but it could install only a basic print driver with no access to quality settings. We couldn't find a print driver with the features we'd expect on Lexmark's website.

As with Brother's DCP-8060, you need to unlock the scan head via a switch near the scanner glass. The X342n can make scans over the network, but only if you can be bothered with a convoluted setup process that involves the web-configuration page. We couldn't make the feature work properly, even with the Windows Firewall disabled, so we conducted our scan tests using a USB connection. Scans were quick and reasonably sharp, but colour levels were acceptable only with the auto-tone function switched on. Even then, light shades appeared washed out, with a loss of detail.

Though not as fast as Brother's DCP-8060, the X342n produced quick single and multipage copies. Surprisingly, given the scan results, these were overly dark with a loss of detail among the deepest shades. If you're mostly copying text, though, it will suffice.

The X342n's print speeds were inconsistent. Our letter test arrived at close to the printer's rated 25ppm speed, but our 50-page draft document came out at a disappointing 17ppm, and graphics were particularly slow. Graphics, photos and grey text were fairly good, though dithering in mid-grey regions seemed cruder than in Lexmark's own E250dn. Our black-and-white test photo was too dark, however.

VERDICT

The E342n comes with a 2,500-page starter toner, and has reasonable running costs. Its higher specification makes it seem better value than the DCP-8060, but its higher ownership costs and slower, inferior prints and copies make the Brother DCP-8060 a better buy.

SUMMARY

- ✓ Reasonable running costs
- ✗ Disappointing print speed on some tests
- ✗ Underwhelming scans and copies

MONO LASER MFP 600x600dpi print resolution, 25ppm mono maximum speed, 600x600dpi scan resolution, USB Hi-Speed and 10/100 Ethernet interfaces

PART CODE 0020D0184

SUPPLIER www.misco.co.uk

DETAILS www.lexmark.co.uk

MONO LASER PRINTERS

MONO LASER PRINTERS

BUDGET BUY					BEST BUY				
MANUFACTURER	LEXMARK	KYOCERA MITA	HP	KONICA MINOLTA	DELL	SAMSUNG	OKI	BROTHER	LEXMARK
Model	E250dn	FS-1030D	LaserJet P2015	PagePro 1350EN	Laser Printer 1720dn	ML-3051ND	B2540 MFP	DCP-8060	X342n
Rating	★★★★★	★★★★	★★	★★	★★★★★	★★★	★	★★★★	★★★
Quoted speed, mono	28ppm	22ppm	26ppm	20ppm	28ppm	28ppm	16ppm	28ppm	25ppm
TESTED PRINT SPEEDS									
Test 1, 50-page text document	1m 53s (26.5ppm)	2m 22s (21.1ppm)	2m 0s (25.0ppm)	2m 40s (18.8ppm)	1m 54s (26.3ppm)	1m 55s (26.1ppm)	3m 43s (13.5ppm)	1m 54s (26.3ppm)	2m 56s (17.0ppm)
Test 1, duplex, 50-page text document*	3m 38s (13.8ppm)	4m 31s (11.1ppm)	N/A	N/A	3m 39s (13.7ppm)	2m 43s (18.4ppm)	N/A	N/A	N/A
Test 2, letter, time to first page	9s	10s	9s	14s	9s	11s	23s	10s	11s
Test 2, letter, total time for 50 copies	1m 52s (26.8ppm)	2m 25s (20.7ppm)	2m 0s (25.0ppm)	2m 40s (18.8ppm)	1m 52s (26.8ppm)	1m 53s (26.5ppm)	3m 19s (15.1ppm)	1m 54s (26.3ppm)	2m 7s (23.6ppm)
Test 3, greyscale table entry	1m 10s (20.6ppm)	2m 8s (11.3ppm)	3m 6s (7.7ppm)	5m 11s (4.6ppm)	1m 11s (20.3ppm)	1m 17s (18.7ppm)	7m 33s (3.2ppm)	1m 9s (20.9ppm)	5m 5s (4.7ppm)
Test 4, two 10x8in photos, greyscale	22s	29s	1m 14s	1m 28s	34s	30s	1m 17s	23s	38s
Test 5, six 6x4in photos, greyscale	24s	31s	51s	1m 58s	35s	50s	1m 28s	30s	47s
TESTED SCAN SPEEDS									
Full scan area preview	N/A	N/A	N/A	N/A	N/A	N/A	9s	11s	18s
A4 document at 150dpi/300dpi	N/A	N/A	N/A	N/A	N/A	N/A	19s/1m 1s	17s/38s	17s/24s
6x4in print at 600dpi/1,200dpi	N/A	N/A	N/A	N/A	N/A	N/A	56s/1m 0s	44s/1m 17s	20s/23s
TESTED COPY SPEEDS									
Single A4 page, mono, default quality	N/A	N/A	N/A	N/A	N/A	N/A	15s	10s	12s
10 A4 pages (many to many), mono, default quality	N/A	N/A	N/A	N/A	N/A	N/A	1m 7s	32s	51s
PRINT AND SCAN QUALITY									
Maximum print resolution	600x600dpi	1,800x600dpi	1,200x1,200dpi	1,200x1,200dpi	1,200x1,200dpi	1,200x1,200dpi	600x600dpi	1,200x1,200dpi	600x600dpi
Maximum optical scan resolution (output bit depth)	N/A	N/A	N/A	N/A	N/A	N/A	600x2,400dpi (36-bit)	600x2,400dpi (24-bit)	600x600dpi (24-bit)
PHYSICAL AND ENVIRONMENTAL									
Standard interfaces	Parallel, USB Hi-Speed, 10/100 Ethernet	Parallel, USB Hi-Speed	USB Hi-Speed	Parallel, USB Hi-Speed, 10/100 Ethernet	Parallel, USB Hi-Speed, 10/100 Ethernet	Parallel, USB Hi-Speed, 10/100 Ethernet	USB, 10/100 Ethernet	Parallel, USB Hi-Speed	USB Hi-Speed, 10/100 Ethernet
Optional interfaces	External Gigabit Ethernet, 802.11g wireless print server	10/100 Ethernet, 802.11g wireless	802.11g wireless	None	802.11g wireless	802.11g wireless	None	None	802.11g wireless, Gigabit Ethernet
Dimensions (HxWxD)	260x359x396mm	235x378x375mm	256x350x362mm	283x387x448mm	254x396x345mm	285x400x433mm	412x447x386mm	475x531x450mm	521x530x394mm
Weight	11.4kg	10.5kg	10.3kg	7.8kg	11.4kg	11.1kg	12.0kg	16.3kg	16.3kg
Noise	50dB(A)	53dB(A)	50dB(A)	54dB(A)	51dB(A)	54dB(A)	52dB(A)	55dB(A)	52dB(A)
Duty cycle (sheets per month)	50,000 one-time maximum	20,000	15,000	15,000	25,000	35,000	6,000	20,000	15,000 one-time maximum
Power consumption printing	400W maximum	809W maximum, 370W average	350W maximum	900W maximum, 376W average	400W average	900W maximum, 400W average	340W maximum	1,104W maximum, 660W average	420W maximum
Power consumption sleep mode	9W	4W	7W	15W	9W	11W	13W	15W	14W
PAPER HANDLING									
Maximum paper size (print)	A4/legal	A4/legal	A4/legal	A4/legal	A4	A4/legal	A4/legal	A4/legal	A4/legal
Standard paper inputs (capacity)	2 (250)	2 (300)	2 (300)	2 (250)	2 (250)	2 (300)	2 (250)	2 (250)	2 (250)
Output tray capacity	150 sheets	250 sheets	150 sheets	100 sheets	150 sheets	150 sheets	50 sheets	150 sheets	150 sheets
Duplex	Yes	Yes	No	No	Yes	Yes	No	No	No
Automatic document feeder capacity	N/A	N/A	N/A	N/A	N/A	N/A	50	50	50
COPY FEATURES									
Maximum number of copies	N/A	N/A	N/A	N/A	N/A	N/A	99	99	99
Copier zoom range	N/A	N/A	N/A	N/A	N/A	N/A	25-400%	25-400%	25-400%
Maximum mono copy resolution	N/A	N/A	N/A	N/A	N/A	N/A	600x600dpi	600x1,200dpi	600x600dpi
FAX FEATURES									
Fax modem	N/A	N/A	N/A	N/A	N/A	N/A	33.6Kbit/s	N/A	33.6Kbit/s
Maximum mono fax resolution	N/A	N/A	N/A	N/A	N/A	N/A	203x196dpi	N/A	300x300dpi
Maximum memory capacity (mono pages)	N/A	N/A	N/A	N/A	N/A	N/A	500	N/A	Not disclosed
GENERAL									
Technology	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser	Mono laser
Language(s)	PCL5e, PCL6, PostScript 3	PCL5e, PCL6, PostScript 3, Line Printer, IBM ProPrinter X24E, Epson LQ-850, Diablo 630	PCL5e, PCL6, PostScript 3	PCL5e, PCL6	PCL5e, PCL6, PostScript 3	PCL6, PostScript 3, IBM ProPrinter, Epson	PCL6, PostScript 3	PCL6, PostScript 3	PCL5e, PCL6
Supplied software (MFP)	N/A	N/A	N/A	N/A	N/A	N/A	ScanSoft PaperPort	Brother Control Centre 2, ScanSoft PaperPort 9, OmniPage OCR software	QLINK scan utility, Prestol PageManager, ABBYY OCR software
Supported operating systems	Windows 98 SE/Me/2000/XP/Server 2003/Vista, Mac OS 9, OS X, various Linux and UNIX versions	Windows 2000/XP/Vista, Mac OS 9, OS X, various Linux versions, Citrix MetaFrame	Windows 98 SE/Me/2000/XP/2003 Server, Mac OS X 10.2.8, OS X 10.3.9, OS X 10.4.3, various Linux versions	Windows 98 SE/Me/NT4/2000/XP/2003 Server, Mac OS X 10.2 and later, DOS, SAP3 and Linux	Windows NT4/2000/XP/2003 Server/Vista, Mac OS 9.2, OS X, UNIX, Linux	Windows 95/98/Me/NT4/2000/XP/2003 Server, Mac OS 8.6-9.2, OS X 10.1-10.3, various Linux versions	Windows 98 SE/Me/2000/XP	Windows 98 SE/Me/2000/XP/Vista/2003 Server, Mac OS 9.1-9.2, OS X 10.2.4 or later	Windows 2000/XP/2003 Server, various Citrix MetaFrame versions
Memory	32MB (96MB)	32MB (288MB)	32MB (288MB)	32MB (160MB)	32MB (160MB)	64MB (320MB)	64MB (64MB)	32MB (544MB)	64MB (64MB)
Other features and options	None	Wooden cabinet with storage capacity and castors CB-100, £87	Various warranty and installation options	None	None	Single-sheet face-up output	None	None	None
PRICE AND WARRANTY									
Street price including VAT	£152	£176	£188	£196	£214	£246	£211	£249	£250
Price per mono A4 page including VAT	1.78p	0.75p	1.19p	1.64p	1.60p	1.16p	1.61p	1.10p	1.25p
Price second paper cassette including VAT	550-sheet 002850803, £91	250-sheet PF-17, £87	250-sheet Q5931A, £52	N/A	550-sheet paper drawer, £82	250-sheet ML-53050A, £93	N/A	N/A	N/A
Warranty duration and terms	One year RTB	One year RTB	One year RTB	One year onsite swap-out	One year onsite	One year onsite	One year onsite	One year onsite	One year onsite, next business day
Supplier	www.morecomputers.co.uk	www.morecomputers.co.uk	www.dabs.com	http://uk.insight.com	Dell 08709 075818	www.misco.co.uk	www.printerbase.co.uk	www.morecomputers.co.uk	www.misco.co.uk
Details	www.lexmark.co.uk	www.kyoceramita.co.uk	www.hp.co.uk	www.konicaminoltaprinters.co.uk	www.dell.co.uk	www.samsung.co.uk	www.oki.co.uk	www.brother.co.uk	www.lexmark.co.uk
Part code	003350315	1102C63UK0	CB366A	5250232-200	None	ML-3051ND/XEU	09004383	DCP8060U1	0020D0184

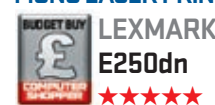
Labs verdict Mono laser printers

This test shows that, although the prices of mono laser printers have fallen, you need to pay more for a good MFP. Oki's B2540 MFP has a temptingly low price, but we found it disappointing. Dell's £335 Multifunction Laser Printer 1815dn remains the best mono laser MFP we've reviewed, but if your budget is limited to £250, Brother's DCP-8060 is a great alternative. It has no network port, but it performed strongly in our tests and is affordable to run.

If you don't need to scan, copy or send faxes, Lexmark's E250dn costs nearly £100 less than its X342n MFP, but it was faster across our print tests. It's quite expensive to run, but for home users it's good value. It's our Budget Buy.

If you intend to print lots of copies, Dell's Laser Printer 1720dn has significantly lower running costs than those of Lexmark's E250dn. It has a network port and a duplex, and produced good-quality prints using its PCL driver. It's our Best Buy. 

MONO LASER PRINTER



MONO LASER PRINTER

